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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/814,339 | 04/01/2004 | Julio A. Abusleme | 108910-00128 | 5351 |
| 4372 | 7590 | 11/15/2005 | EXAMINER | |
| ARENT FOX PLLC 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036 | | | ZEMEL, IRINA SOPJIA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1711 | |

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|---------------------------------|--|
| Office Action Summary | Application No. 10/814,339 | Applicant(s) ABUSLEME ET AL. | |
| | Examiner Irina S. Zemel | Art Unit 1711 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Steps that are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In the instant case, the claimed process of emulsion copolymerization of ethylene 'with chlorotrifluorethylene (CTFE) claims only the steps "firstly charging all the CTFE in the reactor, continuously feeding the ethylene until a partial CTFE conversion, then interrupting the ethylene feeding and continuing the polymerization until a substantial CTFE conversion.". However, those steps are preformed in the examples that produce the copolymers with the claimed second melting temperature (as per example 9, for instance) and those that do not have such temperature (as per example 10). Thus, some essential steps that result in the claimed composition are omitted from the claimed process.

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,107,393 to Abusleme et al', (hereinafter "Abusleme") or US PreGrant Publication 2001/0003124 to Zolotnitsky et al., (hereinafter "Zolotnitsky").

The rejection of claims 1 and 13 stands as per reasons set forth in the previous office action. While the polymers disclosed by both of the references do expressly include a third monomer, the presently claimed copolymers do not preclude the presence of the third comonomer so long as the additional comonomer does not materially affect the novel characteristics of the claimed compositions as provided by the recited transitional phrase "consisting essentially". It is believed that the presence of as low as 0.1 of the third comonomer (as per disclosure of the cited references) does not affect, and even improve the novel mechanical properties of the claimed composition as shown in the tables of the cited references. The burden is shifted to the applicants to provide the evidence to the contrary.

In the alternative, removal of the third co-monomer, i.e., hydrogenated monomer, would have been obvious from the disclosure of Abusleme. In table 1, the reference expressly teaches that omission of the hydrogenated co-monomer results in significantly higher TmII of the copolymer for the copolymers having approximately the same E/CTFE composition (see, for example, illustrative Polymer D as compared to polymer A). Thus, it would have been expected that omission of the third monomer would result in the higher TmII and other expected differences, and, thus would have been obvious for to expect such achieved differences in the resulting polymers for applications when such properties are desired.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 2, 3 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolotnitsky and Abusleme.

The rejection of claims 2 and 3 stands as per reasons of record. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolotnitsky and Abusleme for the same reasons as claims 2 and 3 set forth in the previous office action.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zolotnitsky or Aabusleme in combination with Encyclopedia of Polymer Science and Engineering. Additives, (Hereinafter "Encyclopedia").

The rejection of claim 4 over the combined teachings of the above cited references stands as per reasons of record.

Claims 5-11 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolotnitsky or Aabusleme in combinations with Encyclopedia and US Patent 4,304,713 to Perelman (hereinafter "Perelman") or US Patent 5,688,457 to Buckmaster et al., (hereinafter "Buckmaster").

The rejection of claims 5-11 and 16-17 over the combined teachings of the above cited references stands as per reasons of record.

Response to Arguments

Applicant's arguments filed 8-3-2005 have been fully considered but they are not persuasive. The applicants argue that "amended claim 1 clearly distinguishes the present copolymers which consist only of E and CTFE, and do not include any third monomers, from the ECTFE terpolymer of Abusleme and Zolonitsky which always contain a third hydrogenated monomer. The polymers of the present invention are completely different from those of the cited references since different molar composition attains to different backbone and accordingly to different properties and behavior." (see page 6 of the applicants response).

The examiner, once again, disagrees with the applicants interpretation of the claims. The claims as amended are NOT limited to the two co-monomers, namely E and CTFE, as argued by the applicants. The claim language recited "consisting essentially", not "consisting of", and interpretation if the transitional phrase "consisting essential of" as excluding any other component, or as stated by the applicants the copolymers "do not include any third monomer" is inconsistent with the current state of the law. It has been long established by the court that the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original). "A 'consisting essentially of' claim occupies a middle ground between closed claims that are written in a 'consisting of' format and fully open claims that are drafted in a 'comprising' format." *PPG Industries v. Guardian Industries*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). For the purposes of

searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355. If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See also Ex parte Hoffman, 12 USPQ2d 1061, 1063-64 (Bd. Pat. App. & Inter. 1989). In the instant case, the applicants contend that the novel and basic characteristics of the claimed composition of good mechanical properties in combination with good electrical properties. It is not seen from any evidence on the record how these properties are materially affected by the presence of a little as 0.1 % of the hydrogenated monomer is adversely and materially affects the novel properties of the claimed polymer. In fact, if anything, the mechanical characteristics, especially avoiding brittle behavior is improved by adding the third co-monomer as disclosed in both cited references.

Thus, the presence of the third monomer is not precluded by the claims, even if, *arguendo*, it would have been obvious to omit such third comonomer from the polymers disclosed in the cited references.

The applicants arguments regarding unexpected results as discussed on page 8 of the response are not understood and require some clarification. While the examiner agrees that the copolymers of the comparative example 10 exhibit lower T_{mII} , the

examiner does not understand how the copolymer of the comparative example 10 fall outside of the claimed invention based on any claimed characteristics other than TmII. The compositions of example 4, as stated in applicants response and "formed by E/CTFE copolymers containing 0.5-20% by moles of E as those presently claimed and totally containing 5, 7% of E shows a much higher second melting temperature (205, 90C) with respect to that (179, 80C) of a E/CTFE copolymer containing substantially the same amount of E/CTFE copolymer containing substantially the same amount of E (5, 1t%)." However, as claimed, the composition does NOT require the presence of any additional polymeric components other than the claimed copolymer (note that the presence of the CTFE homopolymer is optional), and the copolymer of the comparative example fully correspond to the claimed characteristic to the content of E in either the copolymer or the composition.

In response o the arguments regarding claim 5, the applicants argument were substantially answered in the previous office action. Once again, the examiner wishes to point out that applicant's arguments are directed to the references individually. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). What applicants chose to call "nucleating agent", namely PTFE, ia also known in the art to be a blowing agent. And the Bukmaster and Perelman reference were merely cited to support the examiners position that PTFE powders are not only known nucleating agents, but also are known foaming agents, and, since the addition of

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nucleating agents would have been known and obvious as per teachings of encyclopedia, it would have been reasonable expected that compositions disclosed by Zolotnitsky and Abusleme modified with such nucleating agents are "foamable" as claimed in the preamble of claims 5-11. . The burden was shifted to the applicant to provide convincing factual evidence to the contrary, i.e., that compositions disclosed by Zolotnitsky and Abusleme modified with nucleating agents are NOT foamable. The applicants provides no evidence whatsoever to that effect.

With respect to the argument regarding the void % achieved in the present invention, it is noted that the features upon which applicant relies (i.e., void %) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The bottom line is that the addition of PTFE to various polymer is known and obvious for its certain function, in the instant case, as a known nucleating agent. It is also reasonable believed that this nucleating agent would form foamable compositions with the polymers of Zolotnitsky and Abusleme, unless applicants provide evidence to the contrary. The fact that in response to applicant's may have recognized another advantage of the known nucleating agent which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

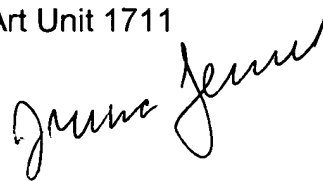
The invention as claimed, thus is still considered unpatentable over the disclosure of the cited reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irina S. Zemel
Examiner
Art Unit 1711



ISZ